

## XIX.

### SMALL-POX IN CANADA, AND THE METHODS OF DEALING WITH IT IN THE DIFFERENT PROVINCES.

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I feel in some measure as if I stand before an audience in whose eyes I shall be likened to the lawyer for the defence in a criminal action at court, since, while in the eyes of the sanitary world a crime has been committed,—that of having an epidemic of small-pox in Canada,—I shall appear to many to be defending the case of a criminal who has been bold enough to say “Not guilty.” But while, on this account, I have some diffidence in appearing before the association, I have still a greater fear before my eyes, viz., that of being accused before my own countrymen of being unpatriotic, by reason of having told to this association, and through it the American people, that Canadians are, judging from the stern logic of facts, far behind the age in sanitary matters; that they have a low estimate of the value of human life; and that there exists in Canada a disregard for law, such as the people of this glorious Union are strangers to.

To me, at the present moment, occur three of the few Latin quotations which the lapse of years has not yet obliterated, and I give them to you, all three at once, so that you may con them over, and be able to say, at the conclusion of this paper, which one is most apt in its application to my remarks upon the subject discussed.

*Ne crede equo*,—in other words, Do not believe the equine (which, being freely translated, means the Canadian).

*Ex uno disce omnes*—From the condition of one province, learn that of all. And,—

*A particulare ad universale arguere non justum est*,—that is, Do not be sure that what is true of the particular, is equally so of the general or universal.

From time to time in Canada, as in different parts of the Union, past years have seen outbreaks of small-pox. The years 1881 and 1882 saw several very considerable outbreaks; and 1882 saw the Provincial Board of Health formed in Ontario.

It will be remembered that 1881 saw an epidemic in England amounting, in the metropolis, to six hundred and twenty deaths to one million of population, and that most of the small-pox in America, of 1881 and the

succeeding year, could be traced to this foreign source. This led to strict quarantine restrictions being placed upon all vessels arriving at New York, Boston, and other ports, and to the organization, under the state board of New York especially, of a system of immigrant inspection. During that year the only serious outbreak in Ontario was at Windsor, opposite Detroit. It was quickly stamped out by the local health authorities, there having been twenty-five cases in all. The year 1883 saw very few outbreaks in Ontario, the only serious one having been in an isolated part of the province, among navvies on the line of the C. P. R., north of Lake Superior. The year 1884 was a much more important one as regards small-pox outbreaks, but in none of them except one did the disease get beyond the first case and those exposed to it. Of these outbreaks I may state the origin, and one or two facts in connection with each.

1. In January a lumberman, sent out to the settlements, travelled by train during the stage of invasion, and was finally isolated by Dr. Powell, of Edgar, there being no second cases.

2. A man and his wife, by steamship Peruvian, landed at Halifax in March. Wife became sick after travelling to Woodstock; was isolated in an old farm-house, and nursed by her husband, but died. The rural board disinfected him, and allowed him to depart before incubation period was over. He went to Goderich, was taken sick, slept with children in the house of a relative, was driven by a doctor to the station, was detected on the train, and was finally isolated at London. After recovery he was imprisoned, and the Goderich doctor fined for his outrageous action.

3. The next outbreak was in the person of a G. T. R. workman at Point Edward, opposite Port Huron. Through imperfect diagnosis, and after persistent self-assertion on the part of the medical man that it was *black measles*, the case was allowed to infect others in the boarding-house, and sent two cases to Detroit, two more in Point Edward, and to Millbrook, near Stratford. It infected no other cases.

4. The next case was in Flos township, in the person of a lady who contracted the disease in a first-class railway coach. No second cases occurred.

5. The next case was in the person of a young man, an immigrant on the Steamship Polynesian, who arrived at Toronto in the end of May, feeling unwell. He left the city immediately, and developed small-pox in Victoria county, to where he was traced. He infected two families, but the disease was promptly stamped out.

6. There were no further outbreaks until October, when the Hungerford outbreak took place. It began in the person of an Irish boy from a Liverpool orphanage—one of a number who were brought out by a benevolent church organization and placed with Hungerford farmers. Whether the boy contracted the disease on ship-board, or from clothing which had been given him in Liverpool, could not be determined. Suffice it to say, that two children in the house where the boy was sent took

the disease, it being in the case of all of them mild, and, occurring in a French Canadian settlement, was thought nothing of. The disease was spread by a man who travelled with a threshing-machine, sleeping in the room with these sick children. He kept moving about from farm-house to farm-house, during the next three weeks after incubation, until so sick that he went to bed in one of the houses in a small settlement. There he died: but none thought it small-pox, nor was it thought more than black measles by a local doctor, until it had caused the man's death and that of quite a number of others. An old local practitioner was then sent into the district by the reeve, and it was declared small-pox by him at once; but the infection had been disseminated in all directions, and within three weeks from its diagnosis had inoculated some two hundred persons, and was present in three townships. On the 29th of November the provincial board assumed control of the district, and on the 12th of December, from this large number of centres of infection, with the exception of two cases from stolen infected clothing in February, Hungerford had its last case of inoculation. The surrounding townships, which had cases by infection from Hungerford, had the disease limited in almost every instance to first cases or their families.

April, 1885, saw a short-lived outbreak in Prince Edward county, and a case was taken to Winnipeg from Hungerford, and left recollections in Minnesota of its having passed that way.

But a cloud no bigger than a man's hand at this time was gathering in the east. On the 23d of April, Alderman Gray, chairman of the civic board of health, Montreal, wrote to me in the following terms:

"MONTREAL, April 23, 1885.

"There were two cases, both Pullman-car conductors, who arrived here. One was sent to the Hotel Dieu, and the other was isolated in his own house; consequently we had two *foci* of the disease to fight. By great exertion, the one in the private house was—although all the inmates took the malady—confined, and no other cases have resulted from it. The one sent to the Hotel Dieu spread to other patients, and I was obliged to open the civic small-pox hospital, which was closed when I took the chairmanship in March, and the second case resulting from the initial one was taken there. Up to date I have taken in nineteen cases, of which seven have died, and the others are doing well. No cases have occurred since Monday. Most of the cases which have died were not vaccinated, and those which were had only one mark."

From this time rumors, then denials, then confirmations of the rumors, were spread from Montreal, and although a city missionary had died from the disease, caught while making his rounds in the French quarter, it was not until Sir Francis Hincks, a prominent politician, died from the disease, brought, probably, to his house by a French servant, that the outside world, and thereafter Montreal itself, took alarm. Looking over the mortuary record from the time of Alderman Gray's letter, it would seem as if he had reason for the statement made by him on April 23,—that he thought he had seen the last case,—since by the end of June there were returned only, April, 6 deaths; May, 10 deaths; June, 13 deaths;—a total of 29. Thenceforward the disease may fairly be said to

have obtained the mastery, since July nearly doubled the previous three months with 52 deaths, and August quadrupled July with 250. This was almost quadrupled again by September, with 829 deaths; and this was increased by one half by October, with 1,243 deaths. But the fight for existence had, ere this, been fairly begun, and November saw a decided decrease in deaths, there being registered for the 27th only 14, and the weekly averages per diem for the month being 33, 25, 20, 10, respectively. Up to the 21st of November, the number of houses registered in the health office, Montreal, as having had small-pox in them, was 3,145; but this does not include all. Calculating roughly, we have, as the results of seven months of small-pox, 3,001 deaths, or nearly one for every infected house.

Unfortunately this epidemic has not been confined to Montreal, but is still widely present in many of the suburbs of that city, and has been introduced into many of the towns and villages of the province of Quebec. Knowing that vaccination in that province had been almost totally neglected amongst the French, and that there was, moreover, a complete absence of any provincial sanitary authority prepared to grapple with the epidemic, the provincial board of Ontario took early advantage of its powers to press forward local health organizations to a point of still greater completeness than had been reached under the comprehensive health act of 1884. General warning to the public of Ontario was monthly given by the health bulletin, and municipal vaccination urged everywhere, both by the bulletin and circulars to local boards. This began to bear fruit in June, when a number of municipalities put into operation the powers of the compulsory vaccination act, which hitherto had been very generally neglected, vaccination having been previously carried on wholly by physicians in their private practice. The epidemic which had so recently occurred in Hungerford, and which had so well proved to the provincial board what effective organization could do, was a powerful lever to it in urging municipal action, while its occurrence had put the board in a position to ask and obtain adequate legislation for dealing yet more effectually than before had been possible with epidemic disease.

It will not be out of place to state here some of the clauses of the Ontario health act bearing upon this point:

Section 12, Public Health Act, 1884, requires the appointment, in every one of the six hundred and fifty municipalities, of a local board of health, by the municipal council; and section 19 gives the provincial board power to appoint where the councils fail to do so. The appointment of a medical health officer and sanitary inspector was made permissive, but not compulsory. Section 3 of the same act gave the board power to require, under sanction of the lieutenant-governor, the performance by local boards of most important duties during the existence of epidemic disease, but unfortunately did not give the provincial board the power to compel the appointment of a medical health officer and sanitary police, or to require the direct obedience to the provincial board of such officers, even though

appointed; nor was there any clause directly giving power to the provincial board to appoint such officers, and tax municipal funds for their payment. The emergencies arising in the Hungerford epidemic made those *lacunæ* so evident, that the government introduced an amendment, 1885, directly dealing with these difficulties.

The following clauses—2, 3, 4, 5, 6, 7, 8, and sub-section 11 of sec. 12—amply illustrate the powers of the board to deal with epidemic disease:

#### CHAPTER 45.

##### AN ACT TO MAKE FURTHER PROVISION REGARDING THE PUBLIC HEALTH.

[Assented to 30th March, 1885.]

Her Majesty, by and with the advice and consent of the legislative assembly of the province of Ontario, enacts as follows:

1. This act may be cited as *The Public Health Act*, 1885.

2. Whenever, from the presence of any formidable contagious disease in any locality, the Provincial Board of Health considers the appointment of a medical health officer necessary for the municipality in which such disease exists, or for any neighboring municipality, and requests the council of any such municipality to appoint a medical health officer, the council shall forthwith appoint a properly qualified medical practitioner to be medical health officer for the municipality.

3. If a council does not appoint a medical health officer within five days after a request in that behalf made by the provincial board, which request may be served upon the head of the council or its clerk, or mailed to either of such officers by registered letter-post, the lieutenant-governor, upon the recommendation of the provincial board, may appoint a medical health officer for such municipality.

4. Every medical health officer appointed by the municipal council shall hold office during the pleasure of the council; and if under the preceding section the medical health officer is appointed by the lieutenant-governor, he shall hold office until the first day of February in the year following that in which he is appointed: *Provided always*, that the municipal council may at any time, upon a two-thirds vote of its members, dismiss any medical health officer for a neglect of duty, and the decision of such council shall be final, and shall not render the corporation liable for any damages; the medical health officer shall be entitled to compensation for services actually rendered up to the time of such dismissal, but the amount of such compensation shall not exceed the salary he would have earned up to the time of such dismissal, and if his salary up to such time is paid, such payment shall be a bar to any other claim for services rendered.

5. Whenever, during the presence of any formidable contagious disease in any municipality or neighboring locality, any medical health officer becomes temporarily or permanently incapable of performing his duties, or resigns his office, or leaves the locality for which he has been appointed, the council shall forthwith appoint another medical health officer in his room.

6. Where two or more municipalities are united into a health district, the provisions of the preceding part of this act shall apply, except that the power and duty of appointing or removing a medical health officer shall be with the district board of health, unless the councils of the municipalities composing such health district have, previous to any request in that behalf being made by the provincial board, united in appointing a medical health officer for such municipalities, and the lieutenant-governor may, in case of their default, appoint a medical health officer for such district.

7. In case the appointment of a medical health officer is made by the Provincial Board of Health, he shall be entitled to recover from the municipality reasonable compensation for his services.

8. Where a medical health officer is appointed, he shall possess all the powers and authority possessed by any health officer or sanitary inspector under *The Public Health Act*, 1884, or any other act in force, and such medical health officer shall perform all duties imposed upon him by any regulations of the Provincial Board of Health, and the

fact that similar duties are by statute imposed upon the local board of health shall not relieve the medical health officer from the performance of such duties.

Section 12 amends sec. 3 of 1884, of which 11 is a sub-section.

(11) For requiring the appointment of sanitary police, to be paid by the municipalities in which they act, for the purpose of assisting and carrying out the health regulations in force in the municipality.

Although the possible invasion of cholera was the strong lever of the provincial board in gaining such powers, it seems nothing less than providential that the Hungerford outbreak occurred to give point to the board's demands, since without this legislation the action taken by the provincial board, in the crisis growing out of the Montreal scourge, would in many respects have been *ultra vires* and impossible.

Until August, action further than that already mentioned was not taken by the provincial board, as no case of small-pox had been imported from Montreal. In that month, however, a circular was sent to all local boards in the towns and townships lying along the trunk lines of railway and along the Ottawa and St. Lawrence rivers, requiring them to at once appoint medical health officers. This was very generally obeyed in those places which had hitherto neglected to take advantage of the powers of the general act of 1884.

In Cornwall occurred the first case, and it was closely followed by cases in Ottawa and Toronto, all being importations from Montreal. The local organizations in each of these places being complete, the cases were promptly isolated, and from them no second cases, except in same household, occurred, this being due to the late discovery of the nature of the cases.

About this time Detroit became alarmed, and the United States Marine Hospital Service established inspections at Port Huron and at Detroit. On the 28th of August, the chairman of the provincial board, in response to an invitation extended to him, left for Montreal to attend a conference of the transportation companies, which was held in the office of the consul-general of the United States in Montreal. In deference to his official position and continental reputation, Dr. C. W. Covernton was appointed chairman of the preliminary conference, held on the 28th of August.

The present state of the epidemic and the future outlook were discussed, and a number of resolutions were drawn up for consideration, to be discussed at an adjourned meeting to be held on the 4th of September. The report of this preliminary conference was forwarded to the provincial health office in Toronto the same night, and was reported the next day to the attorney-general, who at once directed the secretary to have regulations drawn up and approved by the board, under section 3, Public Health Act, 1884, and Public Health Act, 1885 (*vide ante*), to be presented for the consideration of the government. This was done on the same day as the meeting of the adjourned conference in Montreal. The secretary of the provincial board was then directed to proceed at once to Port Huron and Detroit, to examine the inspections at those

points, and to advise regarding action, in concert with the Marine Hospital service, and with state and municipal health authorities. This was done, and Friday, the 4th of September, 1885, became a memorable day, for on this day the Ontario board's regulations became law, its two executive officers returned from the east and west limits of the province to report, and on the same day the lieutenant-governor of the province of Quebec signed an order in council appointing a central board for that province. The Ontario regulations were gazetted the next day, and on that day the provincial board met, heard the chairman's and secretary's reports, and appointed its chief of inspectors' staff, Dr. T. S. Covernton, who had inspected the ground with the chairman during the preceding week. The plan of campaign was then laid out by the secretary of the board and the chief inspector, and the next day the inspector left for the scene of operations. The Ontario regulations went to Montreal with Dr. T. S. Covernton, and appeared in the Montreal papers on the same day they were given to the Toronto public. The plan in outline determined upon was, that the chief-of-staff should reside in Montreal, have enough inspectors to board every train and every boat leaving Montreal for Ontario ports, and to institute a close inspection of all goods and merchandise going into that province, issuing certificates in all cases where their freedom from infection was assured, and causing detention in all others.

The following are the regulations referred to above :

#### REGULATIONS ISSUED BY THE PROVINCIAL BOARD OF HEALTH IN THE MATTER OF SMALL-POX.

WHEREAS, owing to the prevalence of an epidemic of small-pox in Montreal, there is danger of the disease becoming epidemic in Ontario,—*therefore*, the Provincial Board of Health, subject to the approval of the lieutenant-governor in council, enacts the following regulations :

1. Wherever small-pox is present in any municipality in Ontario, the council of every such municipality, and of every municipality adjoining the same, shall at once appoint one or more sanitary policemen for the purpose of assisting to arrest the spread of the disease, and the council of any municipality in Ontario where the Provincial Board of Health deems the appointment of one or more sanitary policemen necessary, shall also make such appointment. If the medical health officer of the municipality, or the Provincial Board of Health, require the appointment of any specified number of sanitary policemen, then such number shall be appointed. In case the council of a municipality neglects or refuses to make the required appointments, the Provincial Board of Health may appoint as many sanitary policemen for such municipality as it deems necessary.
2. Any default on the part of the authorities of any municipality in taking immediate and effective action in carrying out the regulations of the Provincial Board of Health, or of any of the health acts of this province, or of any health by-law in force in the municipality, shall be at once reported by the medical health officer to the secretary of the provincial board, in order that the said board may take such measures as it deems requisite for placing the said municipality in a position, as regards its sanitary arrangements, to effectively combat the said disease.
3. On the occurrence of the first, or any, case of small-pox in a municipality, the medical health officer shall at once remove the person attacked to the isolation hospital, tent, or other place provided under section 44 of the Public Health Act, 1884, or cause such person to be otherwise efficiently isolated, and shall take proper measures for the

disinfection, or, if necessary, the destruction, of all clothing which may have been exposed to the contagion, and for the disinfection and purification of every conveyance, rail-car, steamboat, sailing-vessel, carriage, or other vehicle which may have been exposed to the contagion.

4. He shall further place in another building or tent, which shall be provided by the local board of health, all persons who may have been exposed to the contagion, and shall supply them with all necessities until the period of incubation of the disease shall have elapsed; and no such person shall go, or be permitted to go, abroad until he or she has given satisfactory proof of successful vaccination within the preceding seven years, or shall have obtained a medical certificate of insusceptibility to the vaccine disease, nor until the clothing or effects worn or carried by or with him or her have been properly disinfected, if the same have been exposed to contagion.

5. When any vessel coming from an infected locality enters any port in Ontario, the medical health officer having jurisdiction in the port shall make a strict inspection of the vessel and examination of the passengers, officers, and crew, luggage, clothing, bedding, freight, or other effects, before any person, luggage, freight, or other thing is landed or allowed to be landed from it, and where any infected or exposed person is found on board, he or she shall be dealt with in the manner directed in the preceding regulation numbered four, and no luggage, freight, or other thing shall be landed from the vessel until they have been thoroughly disinfected.

6. With a view of preventing, by means of a systematic inspection of passengers, baggage, and cars, the introduction of infected persons, things, and conveyances into the province, the provincial board, during such time as the present epidemic of small-pox exists in Montreal, or an epidemic of small-pox exists in any other locality by which epidemic the health interests of this province are, in the opinion of the board, likely to be affected, may appoint medical inspectors, who shall perform such duties as may be assigned to them by the board, and may board all trains entering this province from Montreal, or such other locality, and all boats bearing passengers from Montreal, or such other locality, to Ontario ports, and any other train or boat suspected of having infected persons, luggage, freight, or other effects on board, and every such inspector may take, in respect of such persons, luggage, freight, or effects, any sanitary precaution authorized by any of the health acts of this province, or by any regulations issued by the Provincial Board of Health and sanctioned by the lieutenant-governor in council, which, in the opinion of such inspector, are expedient for the purpose of guarding against the further introduction of small-pox into Ontario. The inspector may require any person travelling on any such train or boat either to produce for examination by the inspector a medical certificate of such person having been vaccinated within the preceding seven years, or not being susceptible to the vaccine disease, or to exhibit to such inspector the marks on his or her person of successful vaccination, such as to satisfy the inspector that the same has been performed within seven years, and on default the inspector is empowered to vaccinate such person, either before he or she is permitted to leave the train or boat, or immediately thereafter, at his discretion; and each person so travelling shall answer truthfully all reasonable questions which an inspector shall, in the performance of his duty, ask such person with reference to the places such person has been at, and his or her stay there during the fourteen days next preceding such inquiry being made; and in case such person refuses or omits so to do, the inspector shall be justified in presuming that such person has been within such time exposed to infection, and in acting accordingly.

7. Local medical health officers and all other sanitary officers shall, whenever required by the medical inspectors appointed by the provincial board, aid such inspectors in providing for and compelling the removal of suspected or infected persons from trains or boats, and for isolating and vaccinating such persons, and for supplying them with medical aid; and the expenses attendant upon the discharge of such duties shall be borne by the provincial board in all cases where the persons for which they are performed are unable to pay therefor, and are not residents in the municipality in which they are taken care of.

8. In every municipality in which small-pox exists such local arrangements as are provided for by chapter 191 of the Revised Statutes of Ontario shall be made by the local



board of health for the systematic and compulsory performance of vaccination, wherever the council of any locality shall omit to make such arrangements, or may not be authorized by the said act to make the same. In every such municipality any person who has not been successfully vaccinated within seven years, or who does not hold a medical certificate of his or her insusceptibility to the vaccine disease, ascertained upon an attempt to vaccinate made within seven years, shall procure the vaccination of himself or herself within three days of being requested in writing by any health officer of the municipality to obtain vaccination, or within a like period after public notification by the local board of health directing general vaccination of the inhabitants of the municipality has been issued, and, in case such vaccination is not successful, every such person shall have the operation repeated until the same is successfully performed, or he or she obtains a certificate of insusceptibility to vaccine disease.

9. Until the publication of notice in the *Ontario Gazette*, removing the prohibition, no rags or clothing shipped by boat, rail-car, or other conveyance, as merchandise from Montreal or other infected locality, shall be landed or permitted to be landed in any part of the province, unless accompanied by a properly authenticated certificate from a health officer appointed under the health act of Ontario, or from some person approved of by the Provincial Board of Health certifying that the said articles had been properly disinfected before shipment, or were free from infection.

10. The medical inspectors, to whom is assigned the duty of inspecting trains and boats running from Montreal westerly, shall, in respect to the duties hereinafter mentioned, be governed by the following rules:

(1) An inspector shall attend at the railway station or steamboat wharf at Montreal a reasonable time prior to the departure of every boat or train going west, and shall, whenever he deems it expedient, take passage on such boat or train.

(2) He shall notice whether passengers have come off the trains or boats, or whether their journey commences at Montreal.

(3) He shall notice whether passengers have tickets direct from Montreal, or whether the dates on the tickets show that the passengers have probably stopped over there or elsewhere.

(4) He shall note the destination of all such persons.

(5) He shall obtain information as to the quarters whence they have come, and whether there is any reason to suspect their being infected.

(6) If the inspector believes that any such person is infected, or that his or her clothing or other effects contain infection, the inspector shall detain such person, and his or her clothing and effects aforesaid, at some convenient point *en route*, until the period of incubation is over, and the clothing and other effects shall be at once disinfected.

(7) If the medical inspector only suspects that any person on board, or the effects of any such person, have been exposed to infection, the medical inspector shall notify the medical health officer of the locality to which the person is going to meet the train or boat, and to keep the said person thereafter under observation.

(8) In either of the cases mentioned in the two next preceding rules, unless the person believed to be conveying or suspected of conveying contagion shows satisfactory proof of vaccination within seven years, or of insusceptibility to the vaccine disease, he shall be forthwith vaccinated, and, if necessary, shall be detained by the local health officer until vaccinated by him or some other proper person.

(9) The effects of persons regarding whom there is suspicion should be dealt with as directed by the Public Health Act, 1884.

(10) The action to be taken in the event of a case of small-pox being discovered is shortly as follows: (a) Detention and isolation of persons affected; (b) fumigation of car or boat; (c) vaccination of all persons who have been exposed to the contagion; (d) detention of any person who refuses to be vaccinated; (e) notification of local health officers at places of destination.

(11) The medical inspector to whom is assigned the duty of inspecting trains or boats running from any other place than Montreal shall be governed by the rules laid down in Regulation 10, substituting the name of such place for Montreal, and such rules shall apply in whatever direction the boat or train may run from such place.

To appreciate the boldness of the task undertaken by the Ontario board, and the delicacy, associated with firmness, required for its success, there are several points that must not be overlooked.

1. It had become a question of some doubt as to how far provincial powers could enable the board to undertake the inspection of trains, inasmuch as the authority over *through* or inter-provincial railways is in the hands of the Dominion government. This difficulty was, however, obviated by the readiness of the two trunk lines of railway to coöperate with the provincial board.

2. The second difficulty was that of the provincial board requiring of every merchant in Montreal compliance with its demands,—that each must have all goods for export fumigated properly to the satisfaction of the board, that all their employés be vaccinated, and that the homes of the employés be visited weekly to see that no small-pox existed in them, the infection of which might be carried to the warehouses.

3. The fact that in the metropolis of another province, with hundreds of prominent local physicians, the Ontario board had presumed to establish a sanitary inquisition, and to tell them that Ontario could not trust her interests in their hands; and this, too, in the face of the fact that the civic board of Montreal had agreed to appoint inspectors for all trains and boats leaving for the west. Every one will forgive the *amour propre*, which caused some newspaper comments, anything but complimentary to the Ontario board, to be made in the Montreal papers.

There were other but minor difficulties, which made the undertaking of the Provincial Board of Health of Ontario anything but a pleasant one. The duty of the board was, however, a plain one, viz., to keep small-pox from becoming epidemic in Ontario, and it took such action as was best calculated to effect that end.

All will see why this apparent invasion of Montreal seemed necessary.

(a) The various train inspectors could begin their work at once, both of removing dangerous persons, and of inspecting and vaccinating all others.

(b) They could all report to one chief, who in turn could report to the central office in Toronto.

(c) Vaccine and other necessities could be supplied from one centre.

(d) All baggage for fumigation could be selected by the time Ontario was reached.

(e) No detention of trains at the Ontario boundary was necessary, as would have been had the board's inspection begun there.

(f) Merchants who were willing to carry out the board's suggestions could get their certificates from the Ontario office before shipping, and the chief inspector could satisfy himself, by personal inspection, of the precautions taken by them. This was a great boon to Montreal merchants, and they appreciated it, since by it thousands of orders were saved from cancellation.

(g) The non-existence of any train inspection by the central board of Quebec, not yet organized, and by the fact that the Montreal civic board

had not yet shown an activity equal to controlling the epidemic in that city, much less of protecting outside places.

Many other reasons might be given, but these were the principal ones. Provincial and race prejudice could not be wholly overlooked, or the publicly made statements that Toronto and the West were trying to ruin the trade of Montreal.

The triumph of the board over the difficulties, at first apparently so great, is a tribute to intelligent sanitation, and to the practical value of internal quarantine, so called, which, as facts presently to be presented will show, make it possible not only to destroy, but in a very remarkable degree to improvise, trade and commerce, by establishing confidence in the mind of the general public.

A confidence grew in the minds of Ontario importers and the whole people, that the goods which had the certificates of the Ontario board accompanying them were free from infection.

The first of those to appreciate the action taken by the Ontario board was a body of the most prominent merchants of the city, who had, with subdivisions, united in a merchants' sanitary association, and which had, for a week before the advent of the Ontario inspectors, been prosecuting vaccination and inspection of their employés and those in their homes, and in some cases had been fumigating goods intended for export. Their failing trade caused them to see, in Ontario's action, hope, and they at once seconded the board's efforts, and thus the granting of merchandise certificates began. From day to day the number of firms consenting to the board's conditions of granting certificates increased; and in only a few cases was a disregard for them shown. The demand made, in one instance, on the Grand Trunk Railway freight office not to forward some packages lacking certificates, since they would be stopped in Ontario, and which was at once assented to by the company, showed the shippers that there was no alternative, so that such an example of firmness had its effects on all; and as a consequence some twenty thousand merchandise certificates had been issued by the middle of October. There were associations of dry goods men, furriers, boot and shoe men, felt-workers, shirt-makers, etc., while rags were entirely refused shipment certificates.

Such was the work which gradually extended to the inspection of firms of all kinds doing business in Ontario. Within the first fortnight hundreds of orders had been cancelled. After that, by our action, the filled orders were accepted, and the panic regarding goods was over.

Local boards in Ontario, here and there, passed resolutions to keep out all Montreal goods; but advice in special instances enabled the provincial board to have such cancellation orders rescinded. The central office in Montreal became, however, an office where persons going West went for vaccination and certificates. In fact it was besieged from morning till night. The extension of the work of inspection to the trains was instituted on the same day as that in the city began, and by Wednesday, the 9th of September, every train and boat leaving the city of Montreal for Ontario was inspected by Ontario men. Owing to the novelty of the

work, all persons producing certificates of vaccination, or showing evidence on their persons of successful vaccination, were allowed to proceed West; but as within the next three weeks several new cases of small-pox had occurred in Ontario, two of them having been introduced from Montreal, the train inspectors were instructed to take no certificates unless signed by well known Quebec physicians, but to require evidence of vaccination in every case where there was any possibility of deception. This was made necessary by the fact of deception being used, owing to the use of forged certificates, or by certificates being given now and then by men less anxious to maintain their honor and their professional good name than they were to retain the favor of patients who came to them for certificates of vaccination.

The persistent refusal, in occasional instances, of certain travellers to be vaccinated, caused the officers much trouble, and hence detention stations west of the Ontario boundary became necessary. Sanitary police were appointed, and met every train at Lancaster, Alexandria, and Ottawa. Many of the experiences of the officers are both amusing and instructive, but do not require here any extended reference. The other part of the train-inspector's work—that of selecting out baggage for fumigation—was also undertaken and carried out in all cases where the character and point of departure seemed to indicate a necessity therefor. This matter, which was undertaken with characteristic thoroughness by the chief of inspection, was managed in the following way: He obtained, through the courtesy of the local board of health of Montreal, the numbers of all houses on the various streets where small-pox was or had been. When a passenger was asked if he came from Montreal, what street, and whether vaccinated, the inspector examined his note-book, with all the numbers entered on the streets, alphabetically arranged, and if the passenger came from such a house or near it, his checks were taken and his baggage was detained, at the various points of entry to the province, and fumigated. Judged by results, the system has proved most satisfactory. In not a single case that I am at present aware of has the disease been traced to infected baggage, while it has created much less trouble and inconvenience, not to say irritation, to travellers than would have been the case if wholesale, and, in my opinion, wholly unnecessary, fumigation had been carried out.

The system thus inaugurated, and which has been briefly set forth, was, as will be observed, similarly carrying out in detail the plans outlined in the resolutions of the meeting, of various interests already referred to, and, as stated in the first report sent me by the chief-of-staff, met with a gratifying approval from not only American Consul-General Anderson, but also from the Montreal Clothiers' Association, as stated in the letter of its chairman to the chairman of the Ontario board.

When the system of inspection thus outlined had been instituted, the inspector of the board was directed to set out and inspect the Ontario ports along the Ottawa. This was done, and communications with all health authorities in them were made with Montreal, they all being urged

to take whatever steps were demanded, both by the health act and the exigencies of the case.

At this time the alarm in outside places may be imagined, when a telegram reached Washington, D. C., stating that Toronto had had two hundred and thirty cases in August, when a United States order was issued to fumigate all Canadian mails, and when an American paper had a report that five hundred and forty persons had died in Montreal in one day!

On the 13th of September the chief-inspector wrote, "On all hands I receive strong commendations of the praiseworthy action of the provincial board of Ontario." This satisfactory feeling toward the work of the Provincial Board of Health showed itself in many ways, one of the chief being the frequent applications of different firms for our sanction to the issue by them of special circulars, showing that they were adopting systematic measures for fumigating goods and protecting their employés against small-pox, and also the fact that later the American inspector's staff took our own certificates from people going south.

Special precautions against the carrying of the infection on western-bound boats were taken in October, owing to one or two cases having been carried in this manner. As cases of small-pox existed in Quebec ports west of Montreal, it was thought desirable to have all boats inspected, as regards merchandise and crew, at the entrance to the Cornwall canal. This was done by utilizing the local medical health officer as a provincial officer. No cases have occurred from boats since this was done.

Early in October, advantage was taken of the visit of Dr. Rauch, of the Illinois state board, to the St. Lawrence quarantine station, to make him fully acquainted with the whole state of matters as regarded small-pox in Canada, and the precautions being taken in Montreal and Ontario for limiting its spread. This visit was most opportune, as it gave us the opportunity of bringing before American sanitary authorities certain facts which it was hoped would cause certain quarantine restrictions which had been passed upon Ontario travellers at Suspension bridge to be removed. At the time when this inspection was instituted it could not be objected to, since cases had occurred in St. Catharines, Hamilton, and London, the first cases in all instances, however, having been introduced before the Ontario inspection had begun. As this action seemed to the Ontario board, which was aware of how these cases were isolated, to bear with undue severity upon Grand Trunk Railway traffic, the chairman, Dr. C. W. Covernton, was, at the request of the Dominion government, delegated to visit Albany and Burlington, and while there interview Dr. Austin, chief of the U. S. Marine Hospital Service, in regard to the matter, while Surgeon-General Hamilton was communicated with by the board, the whole case being set plainly before him. Dr. Hamilton therefore took the matter up, and ascertained the views of the state boards most immediately interested in regard to it. The Ontario board naturally expected and obtained aid from Dr. Rauch, who was most

intimately acquainted with all that had been done in Ontario, and also from Dr. Austin, who had visited Montreal, where he saw the working of the Ontario system of inspection. Dr. Wheeler, U. S. Marine Hospital Service, stationed at Buffalo, was afterwards deputed by Dr. Hamilton to visit Toronto in regard to the matter, and the Ontario board obtained assurances from him that his influence would be toward the removal of the restrictions. Since his report Dr. Hamilton has consented to its removal only on condition that all Quebec baggage be fumigated on entering Ontario, stating as his reasons therefor that such a precaution was deemed necessary by those state and city boards most immediately interested. This we were not prepared to do unless the Grand Trunk Railway consented to the trouble and expense, since the previous success of our system, in preventing infected baggage going west, seemed to make such a wholesale fumigation still more unnecessary when the epidemic showed such marked signs of decline. There the matter stands, as the Grand Trunk Railway has not consented to such action.

During November there were in Ontario only some five fresh cases, outside of the ten in Ottawa and five in Toronto, none of which, so far as I know, were fresh importations from Montreal.

The internal organizations of the province during these months has probably been a work of even greater importance than that at the borders. Vaccination has been carried on in a manner wholly unknown before in the province, the compulsory clauses in the cases of the inhabitants of whole municipalities, and in very many regarding school-children, having been enforced. The appointment of medical health officers has been continuously carried on, until some three hundred regularly appointed officers exist, and in most other cases physicians are members of local boards. Small-pox hospitals have been erected in a considerable number of exposed places, and in others temporary hospitals have been secured for use, should occasion demand it. Every municipality practically may be said to have a local board, since, of the six hundred and fifty municipalities in the province, five hundred and sixty-five have reported boards, and those which have not are in most cases sparsely settled townships. When it is considered that this has been done in three years, and that in this time three health acts have been passed, this association, I think, may fairly say that Ontario has not been idle.

It is now my duty to refer to the work done in Quebec, and in doing so I cannot do better than read the statement of facts made by the chairman of the Quebec board, Dr. Hingston, in a circular letter recently published at the direction of the provincial board of Ontario and Quebec.<sup>1</sup>

This statement must, remembering the circumstances under which this central board of Quebec was formed, and, as Dr. Hingston says, the educating process which is necessary in sanitary matters is slow, be considered by every one most satisfactory. While nothing more definite is stated than the names of the one hundred and sixty-five places where boards are formed, and while I am aware that those, even where formed

<sup>1</sup> Dr. Hingston being present at the session, Dr. Bryce omitted this portion of his paper.

in the suburbs of Montreal, are not doing very efficient work, nevertheless it is a good beginning for the French province, so slow to become impregnated with the ideas of English-speaking communities, so ingrained is the sentiment—" *Nos lois, notre langue, et notre religion.*"

In the meantime the states of the American Union, and the other provinces of the Dominion of Canada, have to accept the fact that there still remain many centres of small-pox infection in Lower Canada—how many, I have tried to find out, but have not been able; further, that vaccination is but slowly making its way amongst the *habitans*, and that isolation in the parishes of small-pox cases is at best but imperfectly carried on, and that the central board's authority has been questioned, and in many other cases ignored. Its most recent efforts are being made towards the end of developing local action, by appointing inspectors, acting directly under the authority of the central board, to visit the different municipalities, and take such advisory or even legal measures as the exigencies of the case may demand.

While this French population does not to a very large extent travel frequently or far from home, still they go south to Vermont, Massachusetts, etc., north to the lumber woods, and through to Michigan; and, while it is not agreeable to think so, still our motto must be "*Semper paratus in armis (injicere).*"

The eastern provinces, as Prince Edward Island, Nova Scotia, and New Brunswick, may be considered as likely to organize and stamp out the disease, although it must be confessed that Charlottetown has been slow in getting to work. The new province of Manitoba has acted promptly in the present outbreak, and is prepared by inspectors to capture any stray cases which may pass west from Ontario, or north from Minnesota. The provincial government have appointed county medical health officers in all parts of the province, who are to be paid for whatever work they may have to do when a case of small-pox occurs.

From what has been stated, it is apparent that while in Canada a widespread epidemic has existed since last July, sanitary organization has been such as to arrest it after a determined struggle; and that with continued watchfulness in the *foci* of the disease at present existing, giving time for the dregs of the disease to be removed, the small-pox outbreak in Canada will have ended. That Ontario has been organized from the beginning of the Montreal outbreak has been made plain, while this is illustrated still better by the map before you, which shows all the places which have had cases of the disease. In none except Ottawa have the cases reached more than ten, and only three or four *foci* now exist in the province. Remembering Ontario's geographical and commercial proximity to Montreal, that three railway lines, the only ones running westward, and all the Ottawa and St. Lawrence navigation distributes to the province, I believe this association will agree,—when, under such conditions, not more than twenty places have had cases in six months; when in few of these did new cases spread from houses first infected; when in no instance were first cases due to imported merchandise or bag-

gage, and only one due, probably, to a letter ; when to-day there are practically only two places having cases in points dangerous to the rest of the province ; and when, so far as I know, no case has been transmitted by way of Ontario to adjoining states since the Ontario train inspection began,—that Ontario deserves the thanks of all those states contiguous to her for having kept small-pox away from them, and the thanks of this association for having instituted a system of internal quarantine, which, while it prevented small-pox outbreaks, did not prohibit all healthy commercial intercourse, and which, while it saved life, not only did not destroy, but actually supported, and in some degree restored, the trade of a great commercial city.

In view of these facts, which, by Dr. Rauch, the secretary of the State Board of Health of Illinois, Dr. Austin of the United States Marine Hospital Service, Consul-General Anderson, Dr. Watson, secretary New Hampshire State Board of Health, Dr. Young, secretary of State Board of Health of Maine, and Dr. Cook, inspector State Board of Health of New Hampshire, have been made known through the newspapers to the American people, and which have further been made the subject of official correspondence between the Dominion government and United States authorities since the middle of October last, I call upon this association, and appeal, not to its sympathies, but to its sense of common justice and ideas of enlightened sanitary work, to say whether a province which has maintained such a record for half a year should still continue to be treated as a menace to neighboring states, should still have an inspection regarding vaccination and luggage of her whole people kept up at Suspension bridge, should still have all luggage fumigated at the Detroit river, which, by an intelligent discrimination of Ontario officers, has been allowed to pass westward from Montreal unfumigated, and which, with probably not more than fifteen small-pox cases at the present moment in the whole province, has an embargo continued, which, in the eyes of the American commercial public, stigmatizes Ontario as an infected centre. We have for three years claimed sanitary kinship with this association, and through it with the people of the United States ;—but what kind of kinship is it, I ask, which treats Ontario in the manner stated, while New York city, with twice as many cases, is not looked upon with any alarm ?

Gentlemen of the association, I accuse no one, no state, no railway, nor any city, of taking any action which a prudent regard for their safety may at one time have deemed necessary ; but I do say, that before such action was taken, common courtesy demanded that the views of the Ontario board regarding Ontario's condition and position should have been obtained by those demanding that such extreme measures, so arbitrary in their character, so imperfect in their execution, and so uncalled for in the face of facts patent to all inquiring, and known to very many prominent state and federal officers of the United States, should have been continued after repeated statements had been published, and when requests for removal had been made by a province so free from any accusations of existing disease, or neglect of precautions against its introduction within her own borders, or its transmission to any neighboring states.